

Indian Standard

(Reaffirmed 2013)

**SPECIFICATION FOR  
DETACHABLE PILOTS FOR USE WITH  
COUNTERBORES AND COUNTERSINK 90°**  
( First Revision )

**1. Scope** — Covers the dimensions and other requirements for detachable pilots for use with counterbores and countersinks 90° conforming to IS : 5710-1988 'Specification for counterbores with Morse taper shanks and detachable pilots (first revision)' and IS : 5703-1988 'Specification for countersinks 90° with Morse taper shanks and detachable pilots (first revision)'.

**2. Dimensions** — See Table 1.

**3. Material** — Carbon steel with tensile strength of not less than 800 MPa.

**4. Hardness** — 680 HV Min,  
750 HV, Max

**5. Designation** — A pilot having  $d_2 = 8$  mm and  $d_1 = 22$  mm conforming to this standard shall be designated as:

Pilot 8 × 22 IS : 5705

**6. General Requirements**

**6.1** Recess between pilot and shank shall be according to IS : 3428-1981 'Dimensions for relief grooves (first revision)'.

**6.2** The provision of dirt grooves are left to the manufacturer's discretion.

**7. Marking** — Pilots shall be marked with designation and manufacturer's name or trade-mark, and month and year of manufacture.

**7.1 Certification Marking** — Details available with the Bureau of Indian Standards.

**8. Sampling** — The sampling and criteria of acceptance shall be in accordance with IS : 7778-1975 'Methods for sampling small tools'.



**EXPLANATORY NOTE**

This standard was first published in 1970. In this revision:

- a) dimensions  $l_1$  and  $l_2$  have been revised.
- b) dimension  $a$  has been included,
- c) surface finish has been included, and
- d) sampling clause has been included.

In the preparation of this standard, considerable assistance has been derived from:

ISO 4208-1977 'Detachable pilots for use with counterbores and 90° countersinks — Dimensions', issued by International Organization for Standardization (ISO).

DIN 1868-1975 'Detachable pilots for counterbores and countersinks', issued by Deutsches Institut für Normung (DIN).

Adopted 15 January 1988

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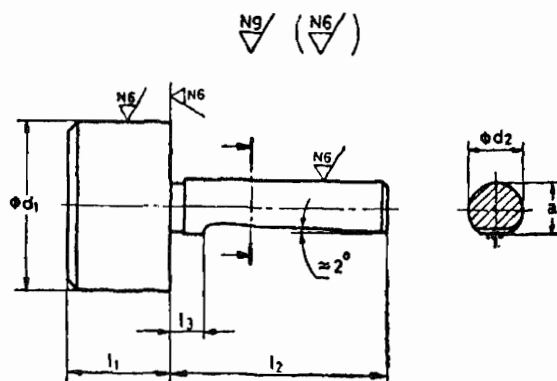
**BUREAU OF INDIAN STANDARDS**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
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MAX. RETAIL PRICE  
OF ALL TAXES  
**₹90**

TABLE 1 DIMENSIONS FOR DETACHABLE PILOTS

( Clause 2 )

All dimensions in millimetres.



$d_3$ f7	$d_1$ e8		$a$ —0.1	$l_1$	$l_2$	$l_3$	For Counterbores Diameter, $d_1^\dagger$		For Countersinks 90° Diameter, $d_1^\ddagger$	
	Over	Up to and Including					Over	Up to and Including	Over	Up to and Including
4	5*	6.3	3.6	5	20	3	12.5	16	—	—
	6.3	8		6					12.5	16
	8	10		7						
	10	12.5		8						
	12.5	14		10						
6	6.3*	8	4.6	6	23	3	16	20	16	20
	8	10		7						
	10	12.5		8						
	12.5	16		10						
	16	18		12						
6	8*	10	5.5	7	28	4	20	25	20	25
	10	12.5		8						
	12.5	16		10						
	16	20		12						
	20	22.4		15						
8	10*	12.5	7.5	8	32	4	25	31.5	25	31.5
	12.5	16		10						
	16	20		12						
	20	25		15						
	25	28		18						
10	12.5*	16	9.1	10	40	5	31.5	40	31.5	40
	16	20		12						
	20	25		15						
	25	31.5		18						
	31.5	35.5		22						
12	16*	20	11.3	12	50	5	40	50	—	—
	20	25		15						
	26	31.5		18						
	31.5	40		22						
	40	45		27						
16	20*	25	15.2	15	60	6	50	63	—	—
	25	31.5		18						
	31.5	40		22						
	40	50		27						
	50	66		30						

\*Includes 5, 6.3, 8, 10, 12.5, 16 and 20 mm also.

†Refer IS : 5710-1988.

‡Refer IS : 5703-1988.